

ABSTRACT

A prestressed, strong foam glass tile for use in construction. The prestressed, strong foam glass tiles of the present invention are capable of withstanding relatively large prestressing as a result of their relatively high compression strength. These prestressed, foam glass tiles will absorb and/or withstand more energy from an explosion, withstand higher heat and wind loading and other mechanical forces than traditional foam glass tiles. The foam glass tile of the present invention is strong enough that it can be prestressed over 1000 psi (lb./sq. in.), and more preferably over 2,000, 3,000, 4,000 and even more preferably over 5,000 psi. The prestressed, strong foam glass tiles of the present invention may be included as part of a prestressed assembly. Said prestressed assembly may be comprised of two metal members, one or more prestressed foam glass tiles, and a tension member such as a tension bolt and/or wires.